

REMARKS

Applicant hereby respectfully requests an personal interview with the Examiner to discuss the merits of the present invention in accordance with MPEP § 713.01. Due to the unavailability of the Examiner, apparently for medical reasons, the interview scheduled for December 29, 2004, was never conducted. Accordingly, Applicant respectfully requests that the Examiner consider the effect of the present amendment and defer taking any further action in this case until an interview can be arranged.

In the recent Office Action the Examiner rejected Claims 1, 2, and 4-7 under 35 U.S.C. § 102(b) as being anticipated by Ratcliffe et al (hereinafter referred to as "Ratcliffe"). It is apparent that the Examiner intended to include Claims 11, 12, 14 and 15 in the instant rejection since the Examiner specifically refers to these claims when discussing the rejection. Claims 8-10 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ratcliffe in view of Genous-Moore. The indication by the Examiner that Claims 3 and 13 would be allowable if rewritten in independent form including all of the limitations of the base claim and of any intervening claims is noted with appreciation.

Applicant will advance arguments hereinbelow to illustrate the manner in which the presently claimed invention is patentably distinguishable from the cited and applied prior art. Reconsideration of the present application is respectfully requested.

The Examiner rejected Claims 1, 2, and 4-7 under 35 U.S.C. § 102(b) as being anticipated by Ratcliffe et al (Ratcliffe). This rejection is respectfully traversed. Regarding the rejection of Claim 1 as

anticipated by Ratcliffe, Applicant respectfully submits that Ratcliffe fails to teach a sensor having an electrical characteristic that varies as the sensor flexes. Additionally, Ratcliffe fails to teach an electrical circuit defining a first threshold and having an output that is activated when the electrical characteristic exceeds the first threshold. Moreover, Ratcliffe fails to teach means for adjusting the first threshold.

The Ratcliffe device is, essentially, a mercury tilt switch 80 in connection with a lamp (indicating device 30) and an electrical power source (batteries 70) contained generally within a housing 40. The mercury tilt switch itself is, essentially, a hollow body 81 having a first terminal 82, a second terminal 84, and a mercury bead 86. At certain positions, the mercury bead contacts both the first and second terminals, thereby completing an electrical circuit. Thus, the mercury tilt switch functions as an on/off switch, switching between a conductive (on) state and a non-conductive (off) state. Construing the conductivity of the mercury tilt switch to be an “electrical characteristic”, it is not an “electrical characteristic that varies as the sensor flexes,” for at least two reasons. First, one skilled in the art would necessarily interpret the claimed limitation to mean that an electrical characteristic changes incrementally in relation to changes in the amount of flexion of the sensor, the change in the electrical characteristic essentially following or tracking changes in the amount of flexion in a manner unrelated to the on/off function Ratcliffe’s mercury tilt switch. Second, neither the mercury tilt switch nor the Ratcliffe device as a whole is taught, explained, or suggested to be flexible. Assuming either the mercury tilt switch or Ratcliff device as a whole to be a “sensor”, neither is flexible and, therefore, it cannot be said that either can have an “electrical characteristic that varies as the sensor flexes.”

Ratcliffe does not teach an electrical circuit defining a first threshold and having an output that is activated when the electrical characteristic exceeds the first threshold. If Ratcliffe can be said to have a “first threshold”, it is a mechanical threshold that is the point at which the mercury bead within the mercury tilt switch makes contact with the first and second terminals to complete an electrical circuit. Ratcliffe refers to this as an “actuation angle”, the angle at or beyond which the mercury tilt switch must be positioned for the mercury bead to move into this position. Rather than having an “output that is activated when the electrical characteristic exceeds the first threshold,” Ratcliffe employs a mercury tilt switch wherein the conductivity of the switch is changed because (due to mechanical operation) a tilt angle of the mercury tilt switch exceeds the actuation angle. Thus, the conductivity of the mercury switch is unchanged until the mercury tilt switch is tilted to or beyond the actuation angle. It cannot be said, therefore, that any action results from an electrical characteristic (the switch conductivity) exceeding a threshold (the actuation angle) because the state change of the electrical characteristic (conductivity) is a result of, and not the cause of, the positioning of the mercury tilt switch beyond an activation angle. Further, Applicant submits that it is clear from the phrase “an electrical circuit defining a first threshold and having an output that is activated when the electrical characteristic exceeds the first threshold” that Applicant’s claimed first threshold is an electrical threshold related to the “electrical characteristic.”

Ratcliffe does not teach means for adjusting the first threshold. As discussed above, if Ratcliffe can be construed to have a “first threshold”, it is the “actuation angle” at which the mercury bead within the mercury tilt switch makes contact with the first and second terminals to complete an electrical circuit.

Ratcliffe states that, in a preferred embodiment, the "actuation angle" is about seven degrees from horizontal. While Ratcliffe suggests that the "actuation angle" is dependent on the physical dimensions of the mercury tilt switch, Ratcliffe does not state or suggest that any of the dimensions of the mercury tilt switch are, or can be, made adjustable. Thus, Ratcliffe does not teach means for adjusting the first threshold. While the Examiner refers to adjusting the threshold by "changing the amount of flexion on the rod," changing the amount of flexion on the rod does not change (or adjust) a threshold. Applicant submits that changing the amount of flexion on the rod simply moves the mercury tilt switch, possibly tilting the mercury tilt switch to an angle closer to or further from the "actuation angle" but not changing the "actuation angle". Moreover, a claim in "means plus function" language is to be considered in light of the structure disclosed in the specification and its equivalents. Assuming, *arguendo*, that "changing the amount of flexion on the rod" can be construed as "adjusting the threshold" (a construction that Applicant rejects for the reasons stated above), this is not a reasonable equivalent to the electrical circuit Applicant has disclosed and claimed and, therefore, cannot be relied upon for teaching "means for adjusting the threshold" as described in the present application.

Regarding Claim 11, Applicant respectfully submits, for the same reasons discussed above regarding Claim 1, that Ratcliffe fails to teach a sensor having an electrical characteristic that varies as a mechanical force is applied to the sensor, fails to teach an electrical circuit defining a first threshold and having an output that is activated when the electrical characteristic exceeds the first threshold, and fails to teach means for adjusting the first threshold.

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Furthermore, in order to show anticipation under 35 U.S.C. § 102(b), the reference must show every element of the claimed invention identically. *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1 USPQ2d 1081 (Fed. Cir. 1986), *Akzo N.V. v. United States Intl. Trade Commission*, 808 F.2d 1471, 1 USPQ2d 1241 (Fed. Cir. 1986). Not only must every element claimed be shown in the prior art reference, but every claimed limitation of each of the elements must be shown; otherwise, the only possible rejection is for obviousness under 35 U.S.C. '103. *Atlas Powder Co. v. E.I. du Pont de Nemours & Co.*, 750 F.2d 1569, 224 USPQ 409 (Fed. Cir. 1984), *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985).

For at least these reasons, Applicant respectfully submits that Ratcliffe is deficient as anticipatory reference against the original independent Claims 1 and 11, and corresponding dependent Claims 2, 4-7, 12, 14, and 15. Accordingly, withdrawal of the rejection under 35 U.S.C. 102 is respectfully requested.

Regarding the rejection of Claims 8-10 under 35 U.S.C. § 103(a) as being unpatentable over Ratcliffe in view of Genous-Moore, Applicant respectfully submits that the secondary reference to fails to overcome the deficiencies in the Ratcliffe reference as discussed above.

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For the foregoing reasons, Applicant respectfully submits that the present application is in condition for allowance. If such is not the case, the Examiner is requested to kindly contact the undersigned in an effort to satisfactorily conclude the prosecution of this application.

Respectfully submitted,



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